transfemoral (TF) route in the catheterization laboratory (C-TF) or hybrid room (OR-TF) and OR non-TF TAVR.
Methods: A retrospective study was performed on 174 patients who underwent TAVR at a single US academic institution using the SAPIEN valve from 11/2011 to 4/2013. Patients were stratified into 3 groups: C-TF TAVR (n=51), OR-TF TAVR (n=39), and OR-non-TF TAVR (n=84). All C-TF patients were performed with i.v. sedation and TTE. The OR-TF and OR-non-TF patients were performed in the hybrid OR with general anesthesia and TEE. Total variable cost, hospital payment, and contribution margin were utilized to determine the financial viability of TAVR.
Results: Compared to OR-TF and OR-non-TF, C-TF had a significantly lower procedure time ($p<0.001$) and postop ventilator hours ($p<0.001$). Resource utilization in terms of ICU ($p<0.001$), postop ($p<0.001$), and total hospital LOS ($p<0.001$) was significantly higher in OR-non-TF patients. Total variable cost in the OR-non-TF TAVR was the highest ($57,197±23,142), but hospital payment was comparably the highest ($62,647±58,826); leading to the highest contribution margin ($19,594±43,553). Total variable cost and hospital payment were lowest in the C-TF group, leading to a contribution margin of $15,529±19,556 (Table).

Table. Admission Resource Use and Costs

	C-TF(n=51)	OR-TF(n=39)	OR-non-TF(n=84)	p value
OR time, min	160 ± 85	229 ± 70	234 ± 49	<0.001
Ventilator hours	1.7 ± 10.1	23.4 ± 66.7	48.4 ± 131.0	<0.001
ICU LOS, hrs	21.9 ± 17.7	50.5 ± 64.1	98.3 ± 138.2	<0.001
Post-op LOS, days	3.7 ± 2.7	4.7 ± 3.2	9.1 ± 7.5	<0.001
Total hospital LOS	6.0 ± 4.9	7.1 ± 5.7	11.2 ± 8.5	<0.001
Total variable cost	$45,173 ± 16,988	$52,268 ± 16,480	$57,197 ± 23,142	<0.001
Hospital payment	$45,412 ± 28,158	$59,931 ± 20,954	$62,647 ± 58,826	0.002
Contribution margin	$15,529 ± 19,556	$10,421 ± 20,389	$19,594 ± 43,553	0.27
All values are mean±SD; all cost data is in $US.				

Conclusions: This is the first study comparing the economic impact of the minimalist and standard approaches to TAVR. The economic benefits of TAVR in all groups were shown to be financially viable (positive contribution margin). Resource utilization was the least in the C-TF group, but hospital reimbursement was also the lowest. A more defined reimbursement strategy for these high-risk patients is required.

TCT-776

Safety of Axillary and TransAortic Approaches for Transcatheter Aortic Valve Replacement in patients older than 85 years old: Results from Italian CoreValve Registry

Claudia Fiorina[1], Marco De Carlo[2], Federico De Marco[3], Corrado Tamburino[4], Gian Paolo Ussia[5], Luca Testa[6], Francesco Bedogni[7], Antonio Colombo[8], Ermanna Chiari[1], Felicia Lipartiti[1], Anna Sonia Petronio[9], Diego maffeo[1], Federica Ettori[1]
[1]Spedali Civili, Brescia, Italy, [2]AOU Pisana, Pisa, Italy, [3]Niguarda Ca' Granda Hospital, Milan, Italy, [4]University of Catania, Catania, Italy, [5]Tor Vergata University of Rome, Rome, Italy, [6]Istituto Clinico S. Ambrogio, Milan, Italy, [7]Istituto Clinico S . Ambrogio, Milan, Italy, [8]EMO GVM Centro Cuore Columbus/San Raffaele Hospital, Milan, Italy, [9]University of Pisa, Pisa, Italy

Background: Trans-femoral (TF) approach represents the first choice of vascular access for transcatheter aortic valve replacement (TAVR). When not feasible, alternative approaches such as axillary artery (TA) or, more recently, direct ascending aorta (DA) are used for self-expandable valve implantation. Aim of this work was to evaluate the safety of TAVR with self-expandable valve through these alternative vascular approaches in ≥ 85 years old patients (pts).
Methods: From the Clinical Service® (former Italian CoreValve Registry) dataset, 1317 consecutive pts underwent TAVR with 3° generation CoreValve in 7 Italian sites between June 2007 and November 2012, were included in this analysis. Pts were divided into two groups according to the vascular access: TF or alternative approaches (TA and DA). Primary end point was the 30-day safety evaluation according to VARC-2 criteria.
Results: Four hundred and eighty-four pts (37%) had an age ≥ 85 years (range, 85-99). TF access was used in 81% and alternative approaches in 19% of cases (16% TA and 2.5% DA). Sex female was higher in TF (64% vs 50%, respectively, p=0.014) while the Logistic Euroscore I was higher in the second group (21% vs 26%, respectively, p=0.039), as well as the presence of coronary artery disease (41% vs 58%, p=0.004) and history of myocardial infarction (14% vs 23%, respectively, p=0.036). There was non significant difference regarding to devices success between two approaches (95% vs 96%, respectively, p=0.8). Combined early safety end point was similar between two groups (28% vs 22%, respectively, p=0.23), as well as the individual components, except for a significant higher incidence of acute kidney injury (stage II- III) in TF compared to alternative accesses (30% vs 17%, respectively, p=0.010). All-cause of death and cardiovascular death at 30 days and 1 year of follow up were similar into two groups irrespective of different type of vascular access.
Conclusions: When TF approach was not feasible because of anatomical reasons, the alternative approach such as axillary artery (TA) or, more recently, direct ascending aorta (DA) could lead to a self-expandable valve implantation safely also in elderly patients.

TCT-777

Long-term Clinical Outcomes in Nonagenarian Patients Undergoing Transcatheter Aortic Valve Implantation: Multicenter Brazilian Registry

Gabriela Campos Cardoso de Lima[1], Dimytri A. Siqueira[2], Luiz Antonio Carvalho[3], Rogério Rogério Sarmento-Leite[4], Jose A. Mangione[5], Pedro Lemos[6], Rogério Tumelero[7], Alexandre S. Colafranceschi[8], Paulo Caramori[9], J. Eduardo Sousa[10], Maria C. Ferreira[11], Luiz Eduardo São Thiago[12], César Medeiros[13], Adriano Dourado[14], Adriano Caixeta[1], Fábio Brito Jr,[1]
[1]Hospital Israelita Albert Einstein, São Paulo, Brazil, [2]Dante Pazzanese Institute of Cardiology, São Paulo, Brazil, [3]Pro-Cardiaco, Rio de Janeiro, Brazil, [4]Instituto de Cardiologia / Fundação Universitária de Cardiologia, Porto Alegre, Brazil, [5]Beneficencia Portuguesa de Sao Paulo, SAo Paulo, Brazil, [6]Heart Institute - InCor, University of Sao Paulo Medical School, São Paulo, Brazil, [7]Hospital São Vicente de Paula, Passo Fundo, Brazil, [8]Instituto Nacional de Cardiologia Laranjeiras, Rio de Janeiro, Brazil, [9]Hospital São Lucas da PUCRS, Porto Alegre, Brazil, [10]Instituto Dante Pazzanese de Cardiologia, São Paulo, Brazil, [11]Hospital Naval Marcílio Dias, Rio de Janeiro, Brazil, [12]Hospital SOS Cardio, Florianópolis , Brazil, [13]Hospital Copa D'Or, Rio de Janeiro, Brazil, [14]Santa Casa de Salvador, Salvador, Brazil

Background: Transcatheter aortic valve implantation (TAVI) has been established as a standard treatment in inoperable and high-risk elderly pts with severe aortic stenosis. However, there is no data thus far assessing the safety and the efficacy of TAVI in pts older than 90 years. We therefore sought to evaluate the early- and long-term clinical outcomes in nonagenarian pts undergoing TAVI.
Methods: Between January 2008 and February 2013, pts with symptomatic severe aortic stenosis underwent and were enrolled in the Brazilian multicenter registry. Among a total of 418 pts, 370 were < 90 years and 48 (13%) were nonagenarian.
Results: Nonagenarian pts were 12 years older than pts < 90 years (92.4 years vs. 80.12 years; p<0.001). Compared with pts < 90 years, nonagenarian pts had higher STS risk score (19.44±13.84% vs. 14.03±12.38%; p=0.005), lower body mass index (24.55±3.40 vs. 26.31±4.61 kg/m2; p=0.01), but higher baseline left ventricular ejection fraction (61.74±12.32% vs. 57.27%±15.60%, p=0.03). 30-day and 1-year main clinical outcomes are presented in Table.

	30 days			1 year *		
	< 90 years	≥ 90 years		< 90 years	≥ 90 years	
	no of pacients (%)		p-value	no patients (%)		p-value
All cause-death	8.4%	10.4%	0.59	18.9	18.8%	0.87
Cardiovascular death	7%	6.2%	0.99	12.4%	10.4%	0.64
Stroke	3.8%	4.2%	0.70	5.4%	8.3%	0.52
Death/ stroke	8.6%	8.3%	0.99	21.9%	27.1%	0.46
Major bleeding	16.5%	10.4%	0.28	17.6%	10.4%	0.21
Safety endpoint**	21.6%	20.8%	0.90	-	-	-

All clinical events were adjudicated according to VARC-2 criteria.
* Kaplan-Meier estimates .
** Composite of death, stroke, major bleeding, renal insufficiency, major vascular complication, re-intervention or repeat surgery.

Conclusions: In this real world Brazilian registry, nonagenarian pts who underwent TAVI had favorable and similar early- and long-term clinical outcomes as compared with pts < 90 years. The treatment of symptomatic severe aortic stenosis in nonagenarians pts with TAVI deemed to be a non-futility approach.